

# How to develop a Storm Water Pollution Prevention Plan



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Water Resources Division  
Department of Environmental Quality



# Who needs to develop the Storm Water Pollution Prevention Plan









Including the following municipal operations

Airports

Wastewater Treatment Plants (1MGD+)

Maintenance facilities for bus and waste  
hauling vehicles

Land fills

Land Applications sites



Regulated Municipalities with an MS4 that discharges to surface waters of the state need to develop a SWPPP if:

There was a fleet and maintenance activities for the fleet were conducted outside

They met the definition of a storage yard

There was evidence of poor housekeeping



For regulated municipalities a compliance assistance document is available on the MDEQ storm water web site on the municipal storm water program page

## Fleet Maintenance and Storage Yards Guidance

Guidance is based on Part I.A.6.d. of the watershed based MS4 Permit

### Who needs to develop and implement a Storm Water Pollution Prevention Plan (SWPPP)?

Municipal owned or operated facilities that are not designated by the Industrial Storm Water regulations, which meet any of the following criteria, must develop and implement a SWPPP.

- Any facility that has a fleet (3 or more vehicles) and maintenance activity in an area with storm water runoff to surface waters of the state
- Any facility that meets the definition of a storage yard with storm water runoff to surface waters of the state. (Even if there are no vehicle maintenance activities at a storage yard the SWPPP will need to be developed)
- A facility with poor housekeeping practices i.e. there are oil stained soils

The industrial storm water certified operator training provides instruction for the development and implementation of the SWPPP. Contact District Water Bureau Staff to schedule training. The manual is located @ <http://www.michigan.gov/deqstormwater> on the Industrial Program page.

### **Definitions:**

**Areas:** distinct parts or sections of land that are exposed to storm water runoff

**Fleet:** A group of vehicles owned or operated as a unit  
(For the purposes of this guidance - 3 or more vehicles)

**Illicit discharge:** means any discharge to, or seepage into a separated storm sewer or surface waters of the state that is not composed entirely of storm water or uncontaminated ground water or non-storm water discharges listed in the MS4 permits

Includes but is not limited to:

- Discharges from floor drains
- Vehicle washing water
- Decant from catch basin cleanout

Please note: All illicit discharges must be eliminated.

**Maintenance:** includes but is not limited to:

- Adding or changing vehicle fluids
- Fueling
- Lubrication
- Painting
- Mechanical repairs
- Parts degreasing
- Vehicle or equipment washing

<http://www.michigan.gov/deqstormwater>



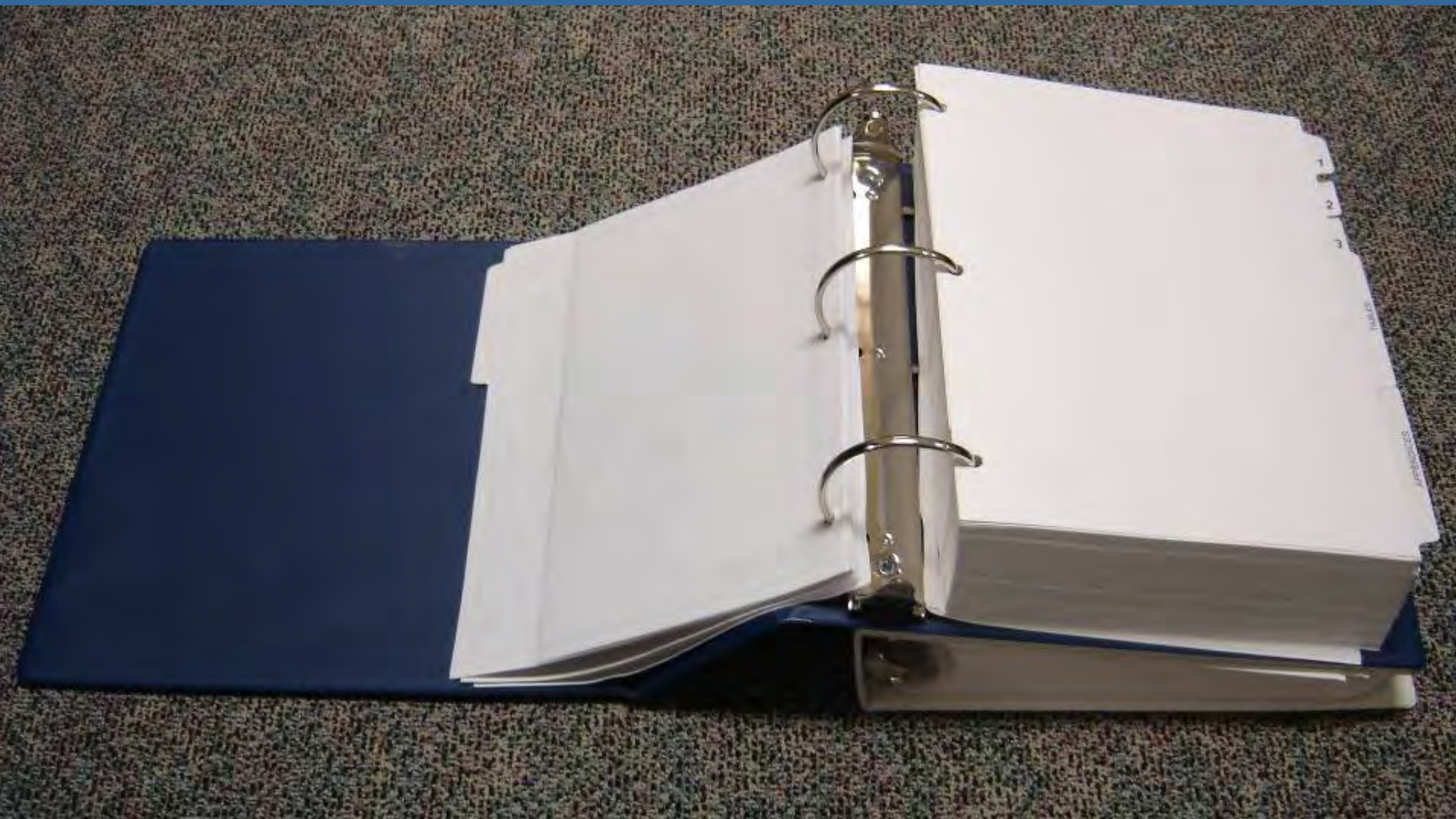
The Industrial Storm Water Certified  
Operator Training Manual is located @  
<http://www.michigan.gov/deqstormwater>  
on the Industrial Program page.



# Storm Water Pollution Prevention Plan (SWPPP)



A lengthy plan is not necessarily an effective plan.





# Pollution Incident Prevention Plan (PIPP) (Part 5 Rules)



Polluting Materials

# Spill Prevention Countermeasures and Control Plan (SPCC) (40 CFR 112)



Oil Pollution Prevention





Ethanol Plants



Asphalt Plants

Sample plans can be obtained from the  
DEQ district offices.





# SWPPP Requirements



Goal→ Prevent the contamination of the surface waters of the state



Sediment





Remember...preventing pollution is the  
**BEST SOLUTION**



# Storm Water Pollution Prevention Plan

## **Source Identification**

Non-Structural Controls

Structural Controls



SWPPP must identify Significant Materials both outside...



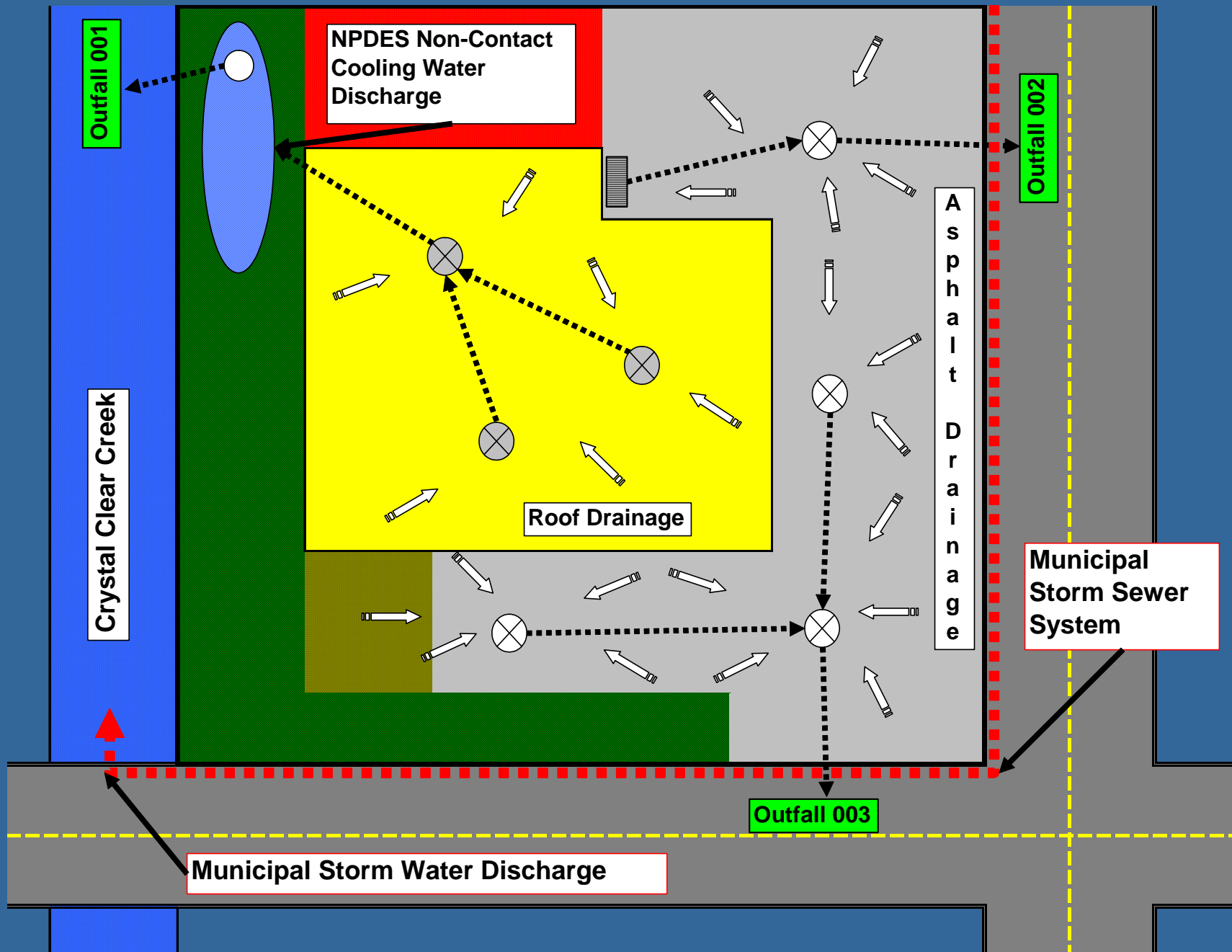
and inside the facility



# Site Map Development



Source Identification





# Site map must show everything relevant to storm water



**Source Identification**

# Identifying Significant Materials



**Source Identification**

# Soils



Source Identification



# Salt



**Source Identification**

# Raw Materials



**Source Identification**

# Fuels and Lubricants



Source Identification



# Solvents and Detergents



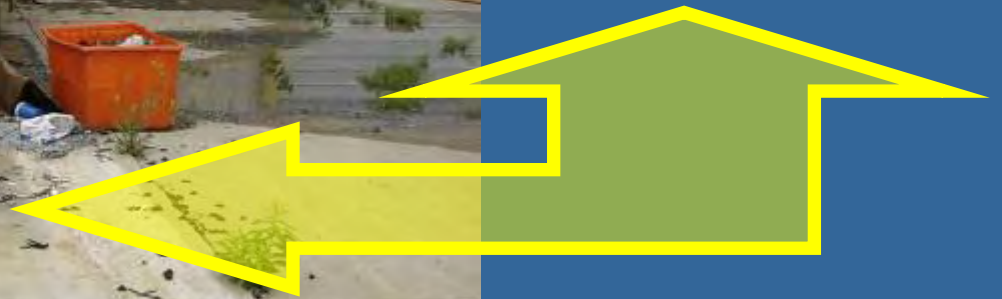
Source Identification

# Wood Chips and Scrap Metal



**Source Identification**

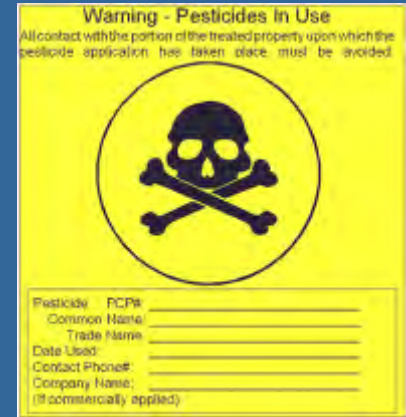
# Plastic Pellets



Source Identification



# Fertilizers and Pesticides



Source Identification

# Food



**Source Identification**

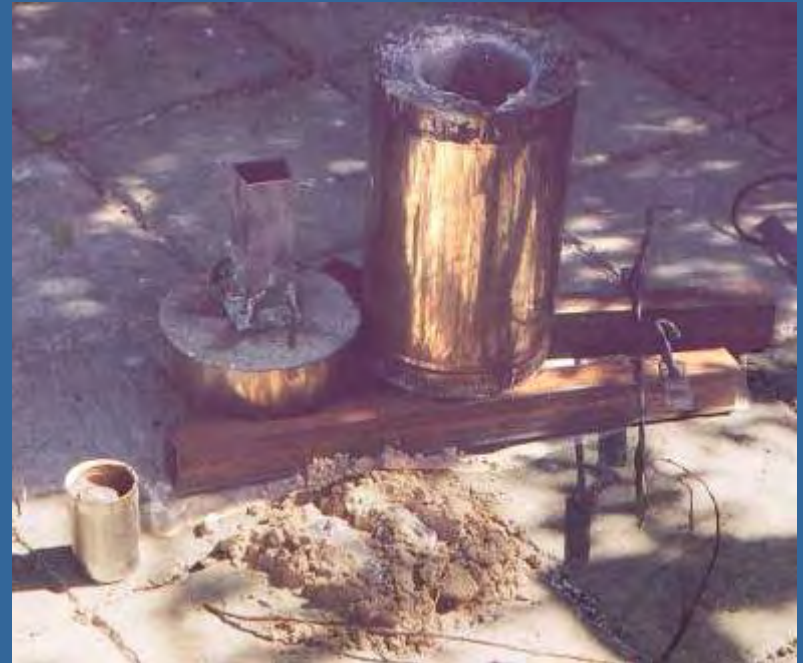
# Waste Products



Source Identification



# Foundry Sand



Source Identification

# Polluting Materials



Source Identification

# Wastewater



Source Identification



# Building Materials



Source Identification

All sources of contamination need to be identified



Source Identification

Remember → The outside and inside of the facility must be evaluated



Source Identification



# Significant Material Inventory



Source Identification

## Evaluation of Reasonable Potential for Contribution of Significant Materials to Storm Water Runoff

Significant Material	Quantity of Material	Storage Area or Process	Method of Exposure	Potential for Exposure to Storm Water	Outfall Through Which Material may be Released	Past Spills
Gasoline	500 gallon tank	Tank in secondary containment on west side of maintenance garage	Fueling trucks by drivers and during filling by vendor.	Medium	001	Overfill by vendor in 2002. Tank is now in secondary containment.
Hydraulic Oil	Two 55 gallon drums	Stored in maintenance garage	Ruptured hydraulic line, leaking cylinders	Medium	001 or 002	No reportable quantities
Motor oil	Three 55 gallon drums	Stored in maintenance garage	Drippage from equipment	Low	001 or 002	No reportable quantities
Used oil	500 gallon tank	Oil drained from equipment in garage stored in tank west side of garage	Spillage when placed in tank	Low	001	No reportable quantities
Acid wash	One 55 gallon drum	Near washout pit	Spillage when mixing washing solution	Low	002	No reportable quantities
Cement	10,000 pounds	Stored in silo	Filling of silo	Very low	002	No reportable quantities
Aggregate	50 tons	Stored in piles near concrete plant	Stored outside	High	002	2 yards to Jordan Creek in 2003 before installation of catch basin inserts.

**Source Identification**

## Evaluation of Reasonable Potential for Contribution of Significant Materials to Storm Water Runoff

Significant Material	Quantity of Material	Storage Area or Process	Method of Exposure	Potential for Exposure to Storm Water	Outfall Through Which Material may be Released	Past Spills
Gasoline	500 gallon tank	Tank in secondary containment on west side of maintenance garage	Fueling trucks by drivers and during filling by vendor.	Medium	001	Overfill by vendor in 2002. Tank is now in secondary containment.

**Source Identification**



# Pollutant Sources



**Source Identification**

# Loading, unloading, and other material handling operations



Source Identification

# Outdoor storage including secondary containment structures



Source Identification



# Outdoor manufacturing or processing activities



Source Identification

# Significant dust or particulate generating processes



Source Identification

# Discharge from vents, stacks, and air emission controls



**Source Identification**



# On-site waste disposal practices



Source Identification

# Maintenance and cleaning of vehicles, machines, and equipment



Source Identification

# Areas of exposed and / or erodible soils



Source Identification



# Sites of Environmental Contamination, under Part 201



Source Identification

# Areas of significant material residues



**Source Identification**

# Areas where animals congregate and deposit wastes



Source Identification



# Other areas unique to your facility



**Source Identification**

# Inventory exposed materials and evaluate method of exposure

Section Listed in General Permit	Storage Areas / Activity Areas	Significant Materials	Exposure Method	Reasonable Potential Evaluation (high,medium,low)	Inlet(s)	Outfalls(s)
1) Loading, unloading, and other material handling operations	1) Boat maintenance area	Oil, battery acid, diesel fuel, gasoline, and other fluids	Spillage during material handling activities	High	A,B	1
2) Outdoor storage including secondary containment structures	1) Boat storage area	NA	Outdoor storage	Low	B	1
	2) Equipment storage area	Grease, hydraulic oil	Outdoor storage	Medium	B	1
	3) Rack storage	Rusting of metal	Outdoor storage	Low	C	2
3) Outdoor manufacturing or processing activities	NA					

# Listing of Significant Spills



Source Identification



# Existing Storm Water Sampling Data



Source Identification

Storm Water sampling **IS NOT** required for all facilities that have storm water permit coverage.



Source Identification

Storm water sampling-only required if it is listed in the Certificate of Coverage or an individual NPDES permit

due to:

Discharges from required secondary containment to surface waters of the state

Site of environmental contamination that may impact storm water runoff

Significant Contributor to Pollution



# Storm Water Pollution Prevention Plan

Source Identification

**Non-Structural  
Controls**

Structural Controls

# 8 Non Structural Controls

1. Preventative Maintenance /  
Routine Inspections

2. Comprehensive  
Inspections

3. Good Housekeeping

4. Material Handling & Spill  
Prevention / Response



**Non-Structural Controls**

5. Sedimentation & Erosion Control
6. Employee Training
7. TMDL requirements
8. Significant Materials Present



**Non-Structural Controls**



# 1. Preventative Maintenance



**Non-Structural Controls**

Focus on areas that have a greater potential to contaminate storm water



**Non-Structural Controls**

# Routine Inspections

Responsibility  
of the  
Certified Operator



Recommended every two weeks

**Non-Structural Controls**



## 12.0 PREVENTATIVE MAINTENANCE INSPECTION FORM

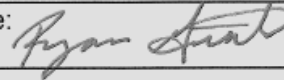
Date: January 24, 2008

Time: 10:00 am

### Inspector

Print: Ryan Grant

Signature:



Areas Inspected	Observation	Actions Taken
Truck Dock	Trash, debris, sediment around trench drain	Area cleaned on 1/24/2008
Fuel Island	No evidence of leakage	NA
Drum Storage Area	Organized well	NA
Roll-Off Bins	Minor spillage, covers on	Spillage cleaned up on 1/24/2008
Pallet Storage Area	Organized well	NA
Catch Basins	Sumps full of sediment	Will be cleaned out on 1/26/2008

Non-Structural Controls

## 2. Good Housekeeping Practices



**Non-Structural Controls**

# Operation and Maintenance Procedures



**Non-Structural Controls**



# Material Storage Practices and Inventory Procedures



**Non-Structural Controls**

# Employee Participation



**Non-Structural Controls**

### 3. Comprehensive Site Inspections



**Non-Structural Controls**



**COMPREHENSIVE** site inspection must be conducted quarterly or on an approved alternative schedule



**Non-Structural Controls**

# All controls should be evaluated



**Non-Structural Controls**

# Record comprehensive site inspections



**Non-Structural Controls**



### 13.0 COMPREHENSIVE SITE INSPECTION FORM

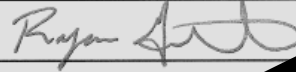
Date: October 1, 2007

Time: 10:00 am

#### Inspector

Print: Ryan Grant

Signature:



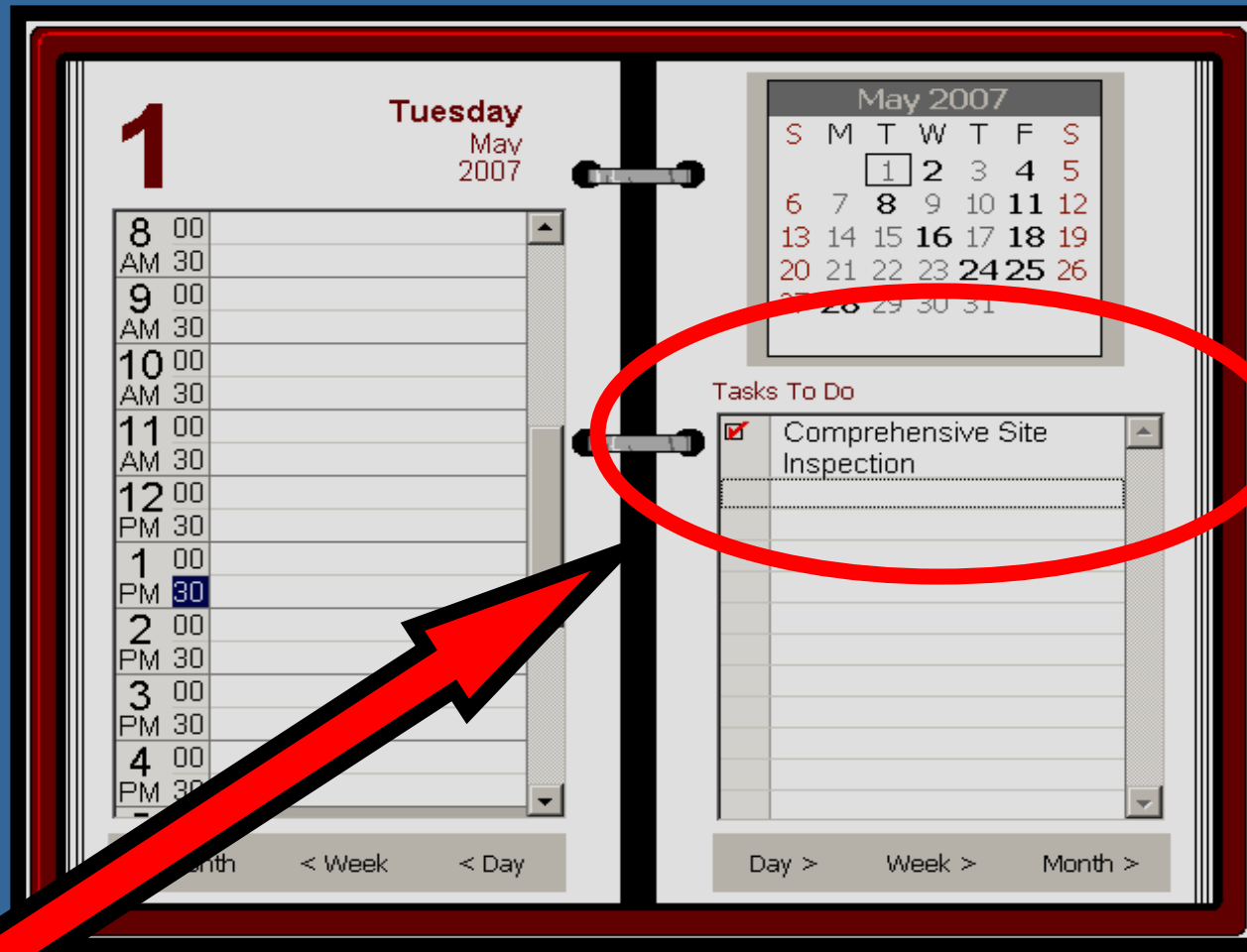
Is the Facility in compliance with the General Permit and the SWPPP: Yes



Areas Inspected	Observation	Actions Taken
Truck Dock	Area clean	NA
Fuel Island	Hose leaking	Replaced hose 10/2/2007
Drum Storage Area	Organized well, no problems	NA
Roll-Off Bins	Area clean, covers on	NA
Pallet Storage Area	Stack of pallets tipped over	Restacked pallets 10/3/2007
Catch Basins	Sumps ½ full of sediment	No action at this time
Spill Kits	Absorbent pads needed in spill kit #2	Absorbent pads added to spill kit #2 10/5/2007
Roof Top Area	Joint failure on bag house piping, sawdust spillage	Joint fixed and sawdust cleaned up 10/1/2007
Preventative Maintenance Inspections	All monthly inspection were conducted	NA
Housekeeping Inspections	All weekly inspection were conducted	NA

**Non-Structural Controls**

A schedule for COMPREHENSIVE site inspections must be identified in the SWPPP



Non-Structural Controls

## 4. Material Handling and Storage Procedures



**Non-Structural Controls**





Tracking spilled  
materials outside



Non-Structural Controls

# Loading and Unloading Procedures



**Non-Structural Controls**

# Poor material storage location



**Non-Structural Controls**



# Material storage procedures



**Non-Structural Controls**

# Avoid storing liquids near drains



**Non-Structural Controls**

# Avoid storing leaky items near drains



**Non-Structural Controls**



# Avoid storing flammable materials near heat



Non-Structural Controls

# Avoid storing acids and bases near each other



**BOOM!!!**

**Non-Structural Controls**

**Avoid stacking materials too high**



**Non-Structural Controls**



# Provide adequate aisle space



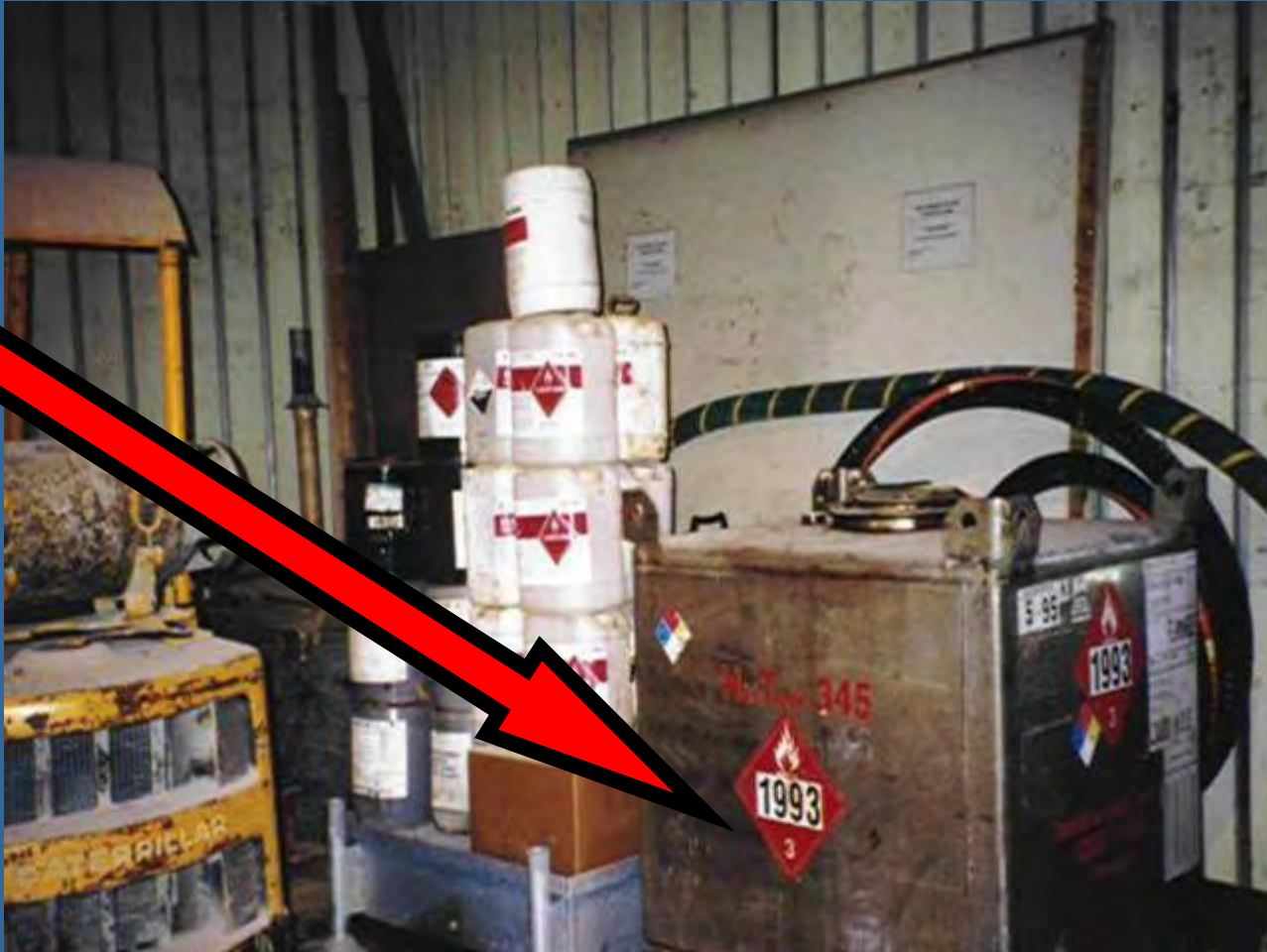
**Non-Structural Controls**

# Barrier posts in high risk areas



**Non-Structural Controls**

# Proper labeling of containers



**Non-Structural Controls**



Barrels and Drums stored outside must be kept off the ground



**Non-Structural Controls**

# Critical Materials in secondary containment



**Non-Structural Controls**

# Spill Prevention & Response



**Non-Structural Controls**



# Identify Spilled Material

Contact Supervisor

Protect Storm Drain

Big Spill

Small Spill

Contain Spill

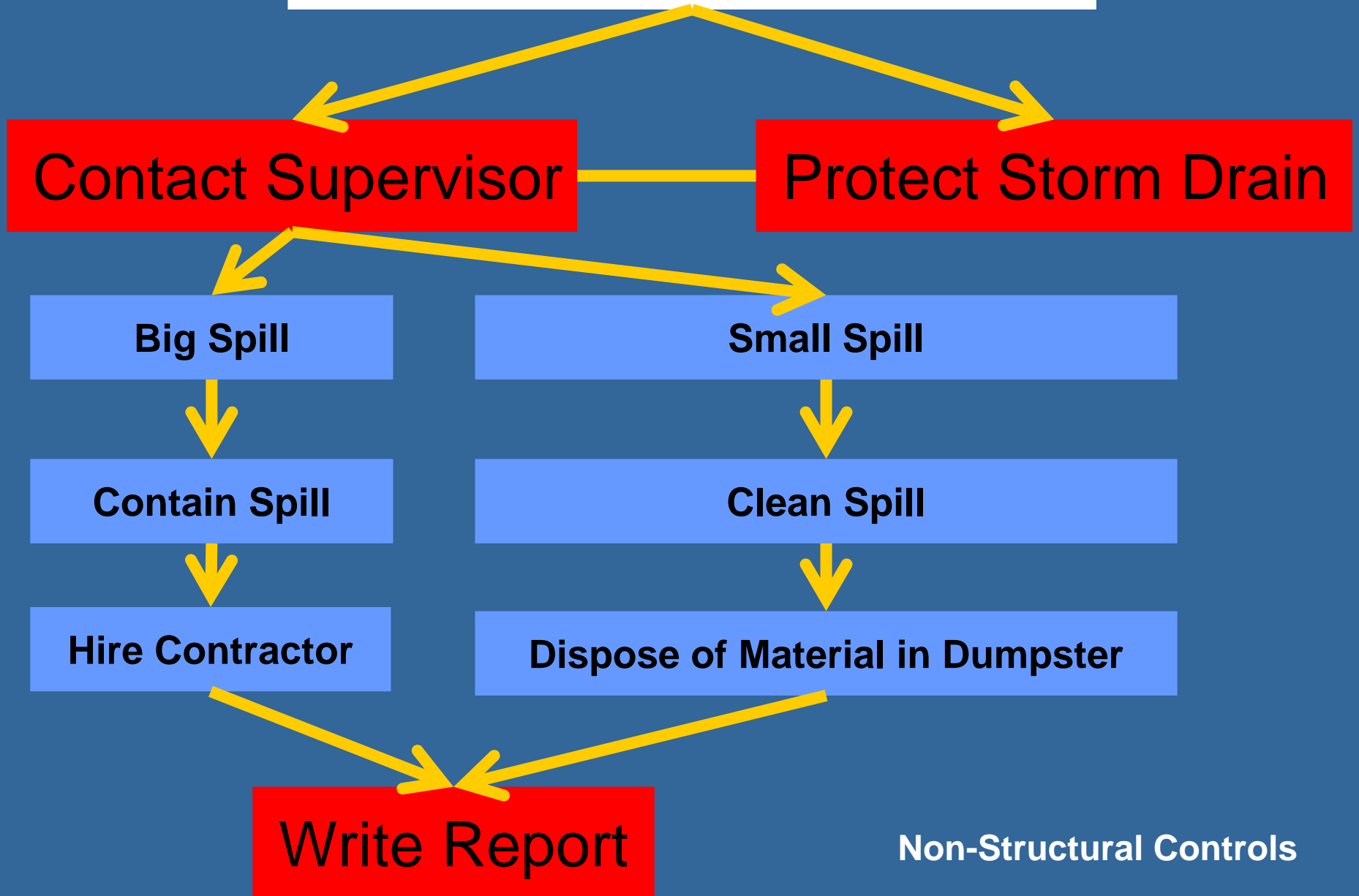
Clean Spill

Hire Contractor

Dispose of Material in Dumpster

Write Report

Non-Structural Controls



# Avoiding spills is economically preferred



**Non-Structural Controls**

# Identifying Potential Spill Areas



**Non-Structural Controls**



# Detailed clean-up procedures

- Spill kit locations
- Clean-up equipment
- Clean-up personal
- Phone numbers



**Non-Structural Controls**

# In the event of a spill



**Non-Structural Controls**

# DEQ Pollution Emergency Alert System (PEAS)

## ➤ **1-800-292-4706**


- Non-business hours

## ➤ **Call the District Office**

- During business hours
- **Make sure a message is left with a person not an answering machine.**



# Spill report form is available on the DEQ website

 MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY	
SPILL OR RELEASE REPORT	
<p><b>NOTE:</b> Some regulations require a specific form to use and procedures to follow when reporting a release. Those forms and procedures <b>MUST</b> be used and followed if reporting under those regulations. This report form is to aid persons reporting releases under regulations that do not require a specific form. This report form is not required to be used. To report a release, some regulations require a facility to call the PEAS Hotline at 800-292-4786, or DEQ District Office that oversees the county where it occurred, and other regulating agencies and provide the following information. A follow-up written report may be required. Keep a copy of this report as documentation that the release was reported. If you prefer to submit this report electronically by FAX or e-mail, contact the regulating agency for the correct telephone number or e-mail address. See the DEQ website on <a href="#">Spill/Release Reporting</a> for more reporting information.</p> <p><i>Please print or type all information.</i></p>	
NAME AND TITLE OF PERSON SUBMITTING WRITTEN REPORT	
TELEPHONE NUMBER (provide area code)	
NAME OF BUSINESS	RELEASE LOCATION (provide address if different than business, if known, and give directions to the spill location. Include nearest highway, town, road intersection, etc.)
STREET ADDRESS	
CITY	STATE
ZIP CODE	
BUSINESS TELEPHONE NUMBER (provide area code)	
SITE IDENTIFICATION NUMBER AND OTHER IDENTIFYING NUMBERS (if applicable)	
COUNTY	TOWNSHIP
TOWNSHIP/SECTION (if known)	
<p><b>RELEASE DATA.</b> Complete all applicable categories. Check all the boxes that apply to the release. Provide the best available information regarding the release and its impacts. Attach additional pages if necessary.</p>	
DATE & TIME OF RELEASE (if known)	DATE & TIME OF DISCOVERY
DURATION OF RELEASE (if known)	
TYPE OF INCIDENT	
<input type="checkbox"/> Explosion <input type="checkbox"/> Fire <input type="checkbox"/> Leaking container <input type="checkbox"/> Loading/unloading release <input type="checkbox"/> Pipe/valve leak or rupture <input type="checkbox"/> Vehicle accident <input type="checkbox"/> Other	
MATERIAL RELEASED (Chemical or trade name) <input type="checkbox"/> CHECK HERE IF ADDITIONAL MATERIALS LISTED ON ATTACHED PAGE.	
CAS NUMBER or HAZARDOUS WASTE CODE	ESTIMATED QUANTITY RELEASED (indicate unit: e.g. lbs, gals, cu ft or yds)
PHYSICAL STATE RELEASED (indicate if solid, liquid, or gas)	
FACTORS CONTRIBUTING TO RELEASE <input type="checkbox"/> Equipment failure <input type="checkbox"/> Operator error <input type="checkbox"/> Faulty process design <input type="checkbox"/> Training deficiencies <input type="checkbox"/> Unusual weather conditions <input type="checkbox"/> Other	
SOURCE OF LOSS <input type="checkbox"/> Container <input type="checkbox"/> Railroad car <input type="checkbox"/> Pipeline <input type="checkbox"/> Ship <input type="checkbox"/> Tank <input type="checkbox"/> Tanker <input type="checkbox"/> Truck <input type="checkbox"/> Other	
TYPE OF MATERIAL RELEASED	IMMEDIATE ACTIONS TAKEN
<input type="checkbox"/> Agricultural: manure, pesticides, fertilizer <input type="checkbox"/> Chemicals <input type="checkbox"/> Flammable or combustible liquid <input type="checkbox"/> Hazardous waste <input type="checkbox"/> Liquid industrial waste <input type="checkbox"/> Oil/petroleum products or waste <input type="checkbox"/> Salt <input type="checkbox"/> Sewage <input type="checkbox"/> Other <input type="checkbox"/> Unknown	<input type="checkbox"/> Containment <input type="checkbox"/> Dilution <input type="checkbox"/> Evaporation <input type="checkbox"/> Hazard removal <input type="checkbox"/> Neutralization <input type="checkbox"/> System shut down <input type="checkbox"/> Diversion of release to treatment <input type="checkbox"/> Decantation of percolates or equipment <input type="checkbox"/> Monitoring <input type="checkbox"/> Other
MATERIAL LISTED OR DEFINED BY <input type="checkbox"/> CAA Section 112(j) list (40 CFR Part 68) <input type="checkbox"/> CERCLA Table 302.4 (40 CFR Part 302) <input type="checkbox"/> EPCRA Extremely Hazardous Substance (40 CFR Part 355) <input type="checkbox"/> Michigan Critical Materials Register or permit <input type="checkbox"/> NREPA Part 31, Part 5 Rules polluting material <input type="checkbox"/> NREPA Part 111 or RCRA hazardous waste <input type="checkbox"/> NREPA Part 121 liquid industrial waste <input type="checkbox"/> Other list <input type="checkbox"/> Unknown	
RELEASE REACHED <input type="checkbox"/> Surface waters (include name of river, lake, drain involved) _____ Distance from spill location to surface water, in feet _____ <input type="checkbox"/> Drain connected to sanitary sewer (include name of wastewater treatment plant and/or street drain, if known) _____ <input type="checkbox"/> Drain connected to storm sewer (include name of drain or water body it discharges into, if known) _____ <input type="checkbox"/> Groundwater (indicate if it is a known or suspected drinking water source and include name of aquifer, if known) _____ <input type="checkbox"/> Soils (include type e.g. clay, sand, loam, etc.) _____ <input type="checkbox"/> Ambient Air <input type="checkbox"/> Spill contained on impervious surface	

Non-Structural Controls

## 5. Soil Erosion and Sedimentation Control



**Non-Structural Controls**

# Erosion and Sedimentation Control Measures

Area Of Concern	Control Measures
Gravel Parking Lot	Silt Sacks in the catch basins
Detention Pond Outfall	Rip Rap around the culvert and in the spill way
Recessed Truck Dock Bay	Silt Sack in the catch basin

**Non-Structural Controls**





Outlet pipes  
to ditches and  
streams



**Non-Structural Controls**





## Culverts and stream crossings



**Non-Structural Controls**

# Areas with exposed soils



**Non-Structural Controls**





Gravel / Dirt lots

Non-Structural Controls







## 6. Employee Training



**Non-Structural Controls**





**Non-Structural Controls**

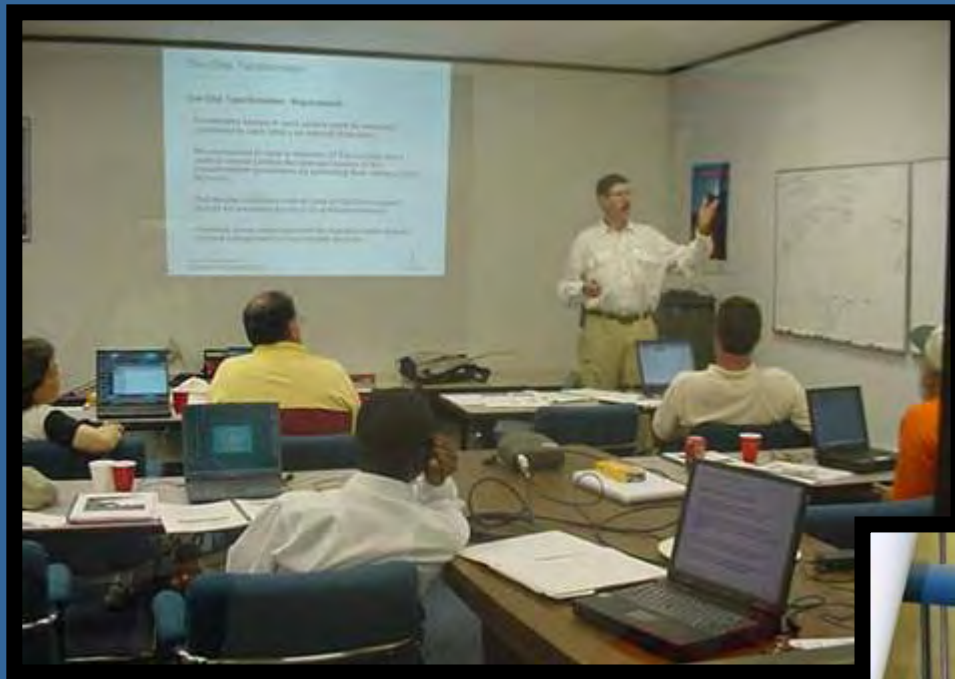


**Non-Structural Controls**



**Non-Structural Controls**





**Non-Structural Controls**

# Preventative Maintenance and Good Housekeeping



**Non-Structural Controls**

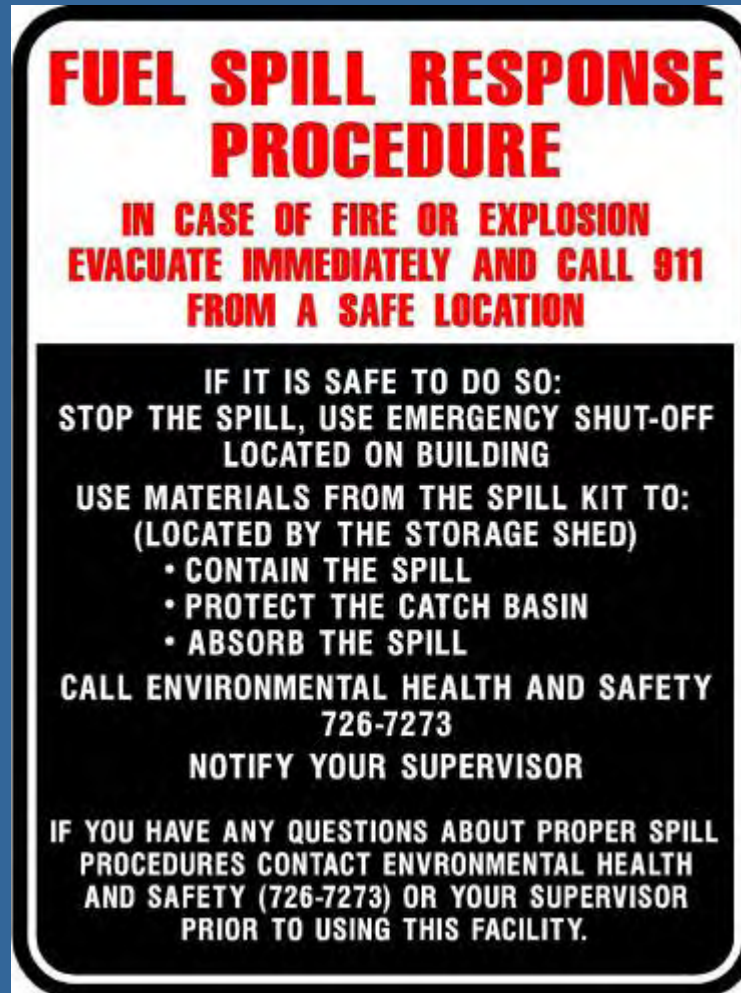
# Spill prevention and response



**Non-Structural Controls**



# Internal spill reporting procedures



**FUEL SPILL RESPONSE  
PROCEDURE**

**IN CASE OF FIRE OR EXPLOSION  
EVACUATE IMMEDIATELY AND CALL 911  
FROM A SAFE LOCATION**

**IF IT IS SAFE TO DO SO:  
STOP THE SPILL, USE EMERGENCY SHUT-OFF  
LOCATED ON BUILDING**

**USE MATERIALS FROM THE SPILL KIT TO:  
(LOCATED BY THE STORAGE SHED)**

- **CONTAIN THE SPILL**
- **PROTECT THE CATCH BASIN**
- **ABSORB THE SPILL**

**CALL ENVIRONMENTAL HEALTH AND SAFETY  
726-7273**

**NOTIFY YOUR SUPERVISOR**

**IF YOU HAVE ANY QUESTIONS ABOUT PROPER SPILL  
PROCEDURES CONTACT ENVIRONMENTAL HEALTH  
AND SAFETY (726-7273) OR YOUR SUPERVISOR  
PRIOR TO USING THIS FACILITY.**

**Non-Structural Controls**

# Employee Training Schedule

Topic	Employees Included	Frequency
Good Housekeeping Practices	All Employees	Time of Hire & Annually
Spill Prevention & Response	1) All Employees 2) Response Team	1) Time of Hire & Annually 2) 6 Months
Internal Spill Reporting Procedures	All Employees	Time of Hire & Annually

**Non-Structural Controls**

## 15.0 EMPLOYEE TRAINING FORM

Date of Session:

**Trainer**

Print:

Signature:

Topics Covered:

Attendee Name	Attendee Signature

Training  
events need to  
be  
documented

Non-Structural Controls



## 7. Total Maximum Daily Loads (TMDLs)



**Non-Structural Controls**

TMDL is the process used to determine how much pollutant load a lake or stream can handle from point and nonpoint sources.



**Non-Structural Controls**

# MDEQ is responsible for developing TMDLs



- Developed to ensure Water Quality Standards will be met in the future

**Non-Structural Controls**



# Water Quality Standards



- State rules established to protect the surface waters
- Rules establish goals in **THREE** areas:

Non-Structural Controls

# 1) Uses of the lakes and streams



**Non-Structural Controls**

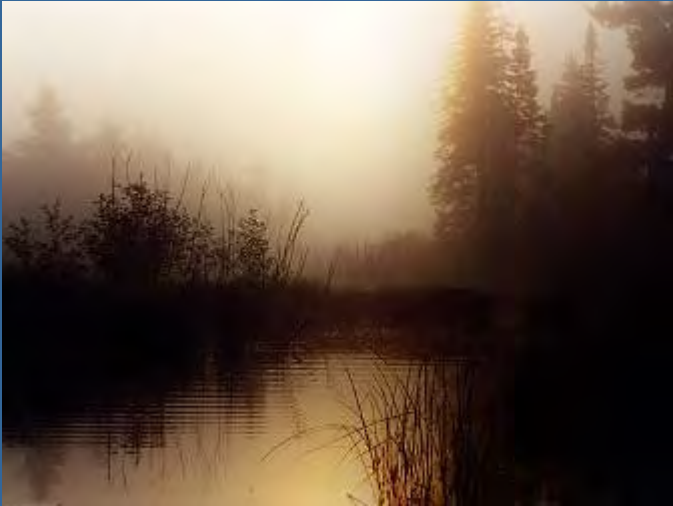
## 2) Safe levels to protect the uses



**Non-Structural Controls**



### 3) Procedures to protect high quality waters



# Once a TMDL is approved by the Environment Protection Agency

- The MDEQ is required to implement the TMDL through existing programs such as **industrial and municipal storm water permits**

- Contact your district staff for specific TMDL information
- If a TMDL applies to your receiving waters, controls to meet the TMDL are required in your SWPPP



## 8. Significant Materials still present



**Non-Structural Controls**

# Sediment causes unnatural turbidity



**Non-Structural Controls**

# Petroleum products cause unnatural oil films



**Non-Structural Controls**

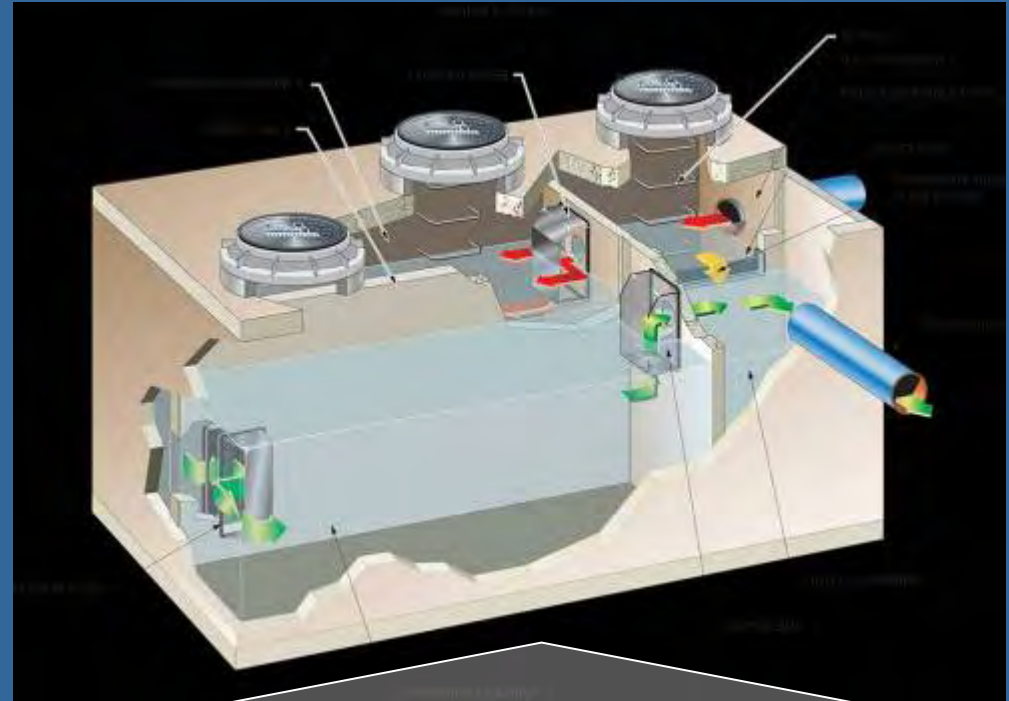


# Surfactants cause unnatural foam



**Non-Structural Controls**

If pollutants still remain after non-structural controls, structural controls will have to be installed.



**Non-Structural Controls**

# Storm Water Pollution Prevention Plan

**Source Identification**

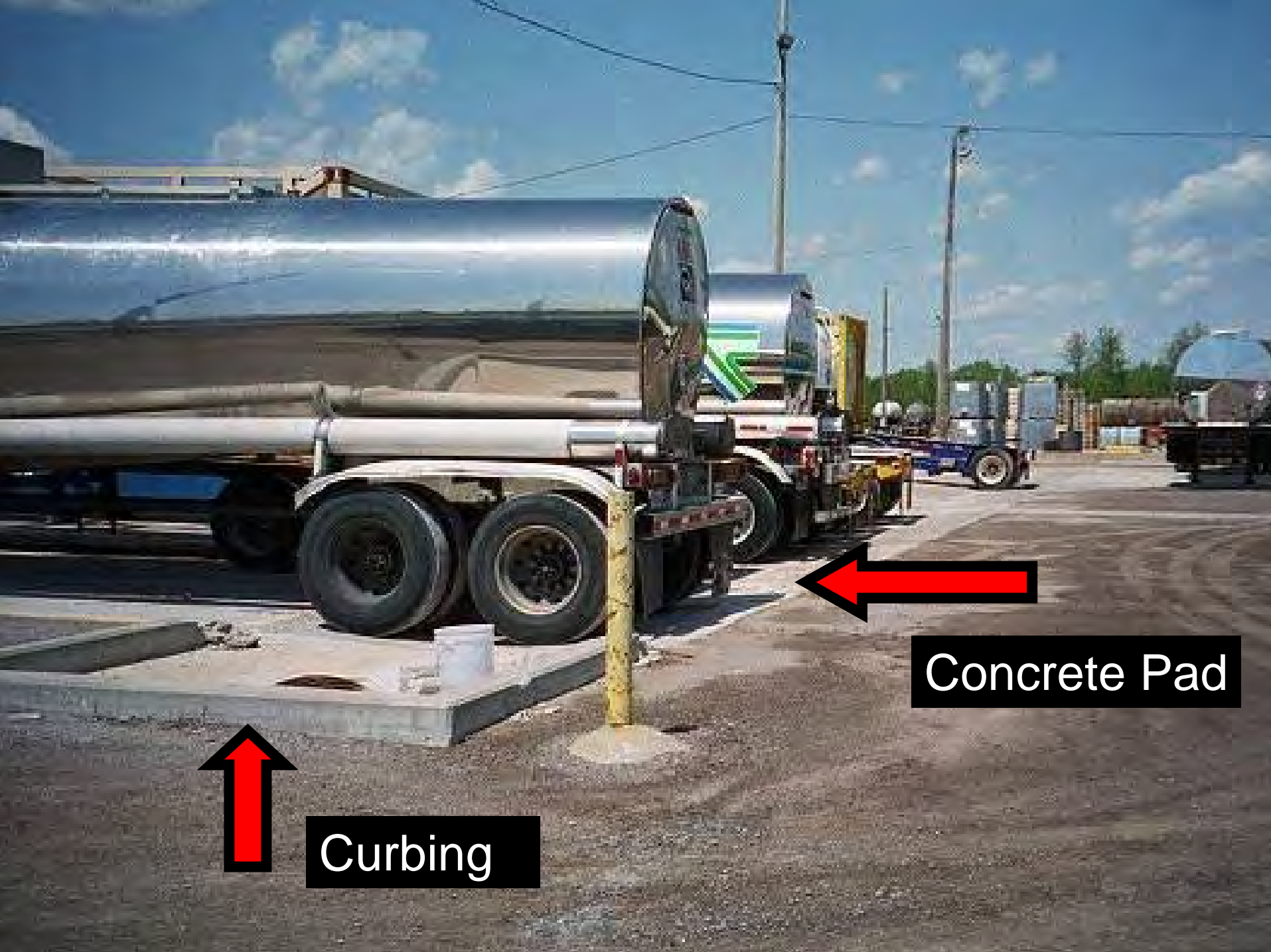
**Non-Structural Controls**

**Structural Controls**



# Structural Controls





Concrete Pad

Curbing

Barrier Preventative Measure



Oil Water Separator Treatment





# Prevention Measures



Limit



or



Prevent

# Signs and Labels





# Safeguards

## Structural Controls







**Security**



# Coverings

## Structural Controls







# Covered dumpsters and roll off containers



# Diversions

## Structural Controls









# Storm Water Conveyances

Structural Controls





# Diversion dikes and berms

Structural Controls

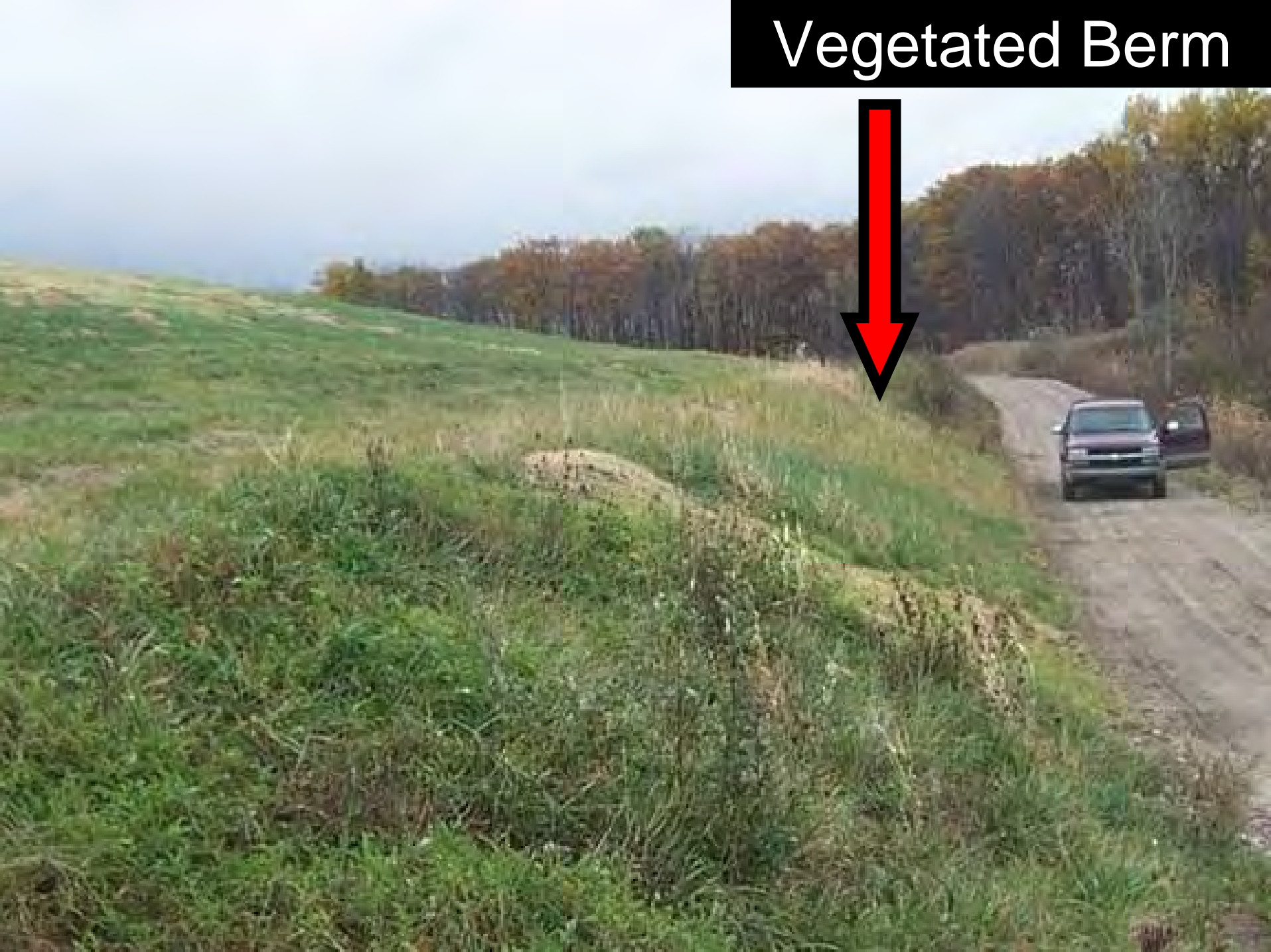


Dike





Vegetated Berm



# Grading

## Structural Controls









# Containment

## Structural Controls



# Secondary Containment







SODIUM HYPOCHLORITE

SODIUM HYPOCHLORITE  
SODIUM HYPO





Cracked

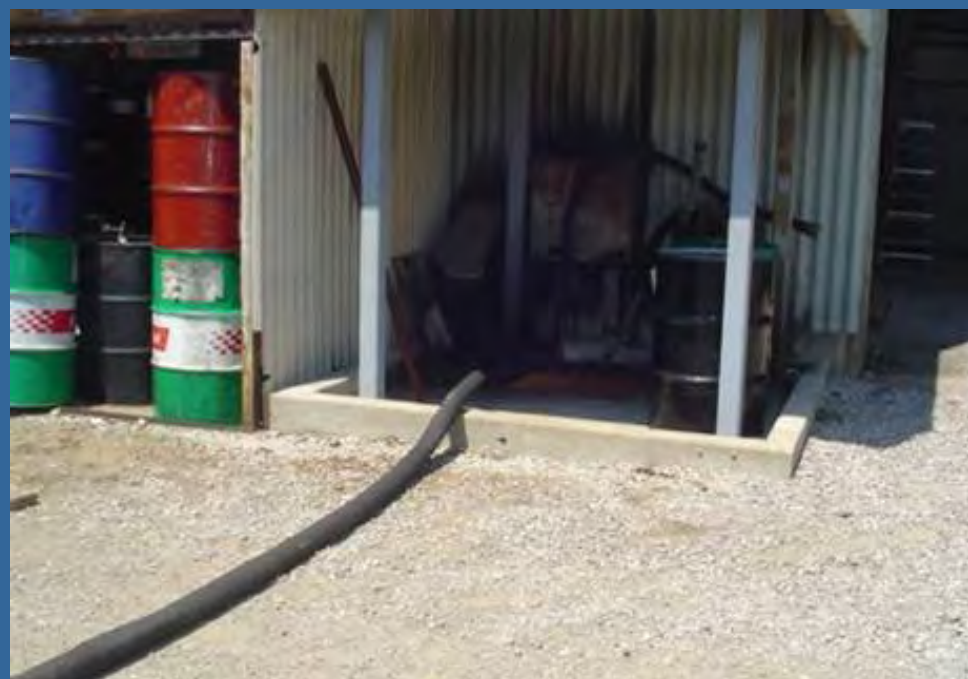


# Curbing

## Structural Controls











Curbing

# Drip Pans

Structural Controls







# Basins

## Structural Controls



Detention — release water at a controlled rate





Retention — water evaporates or infiltrates



## Collection - collect and store water







# Sumps

Structural Controls













# Oil water separator

Structural Controls







OIL SEPARATOR



# Oil water separator failure





# Collection Pad



Oil  
Skimmer



Collection Basin



# Impervious Work Areas







# Annual Reports

Include designated time of year for reviewing the Storm Water Pollution Prevention Plan.

Recommended to do in conjunction with one of the Comprehensive Inspections.

Retain the Annual Report. In the future they will need to be submitted on or before **January 10<sup>th</sup> of each year.**

# Storm Water Pollution Prevention Plan Certification Page

Include certification that the SWPPP has been  
reviewed

Must be signed by:

Certified Operator

The Permittee or Authorized Representative



# Questions?



# What to expect during a DEQ Industrial Storm Water Inspection

Link on the Industrial Program Page of the  
Storm Water Web Site

<http://www.michigan.gov/deqstormwater>



**Commitment: Once every 5 years**

**More frequently  
if necessary**







## Tour of the facility with Certified Operator







Look inside and outside





- Noticed spoil pile on property - was added & appear to cover 71 ac. (may need some permit if Sogin Co.)

WORK ORDER

## STORMWATER POLLUTION PREVENTION PLAN

Prepared for

CO.

**Ann Arbor, Michigan**

WILLIAM H. GARDNER

### 2.5. Control Experiments

3.5 mm. Diameter  
Diameter

A. S. Pridemore, Department of Sociology, University of California, San Diego

### Western and European



# Correct Water Quality Violations



**Letter will be sent**  
**Schedule for corrective actions**  
**Response to letter**





Contact District Industrial Storm Water Staff  
Industrial Program Page

<http://www.michigan.gov/deqstormwater>